

Full- and Three-quarter-grooved Axes from the Bob Evans Shelter, Gallia County, Ohio

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The discovery of a full-grooved and a three-quarter-grooved axe in the lowest level of the Bob Evans rock shelter ("Daniel Boone's Cave") near Rio Grande, Gallia Co., Ohio, in a rare occurrence of these two heavy stone tool types in direct association.

Both axes from the Bob Evans shelter were probably deliberately discarded. The bit of the full-grooved axe was almost entirely ruined by removal of a large fragment, possibly during manufacture, for only one side of the axe had been polished below the hafting groove. The three-quarter-grooved axe was also damaged by removal of a chip from the front edge, immediately above the hafting groove. This may have prevented effective hafting of the axe and lead to its discarding. The two artifacts were found at the very base of excavation in the northern end of the Bob Evans shelter. A radiocarbon date of 2860 B.C. \pm 300 - 320 years has been obtained on charcoal from this stratigraphic level, which accords well with the scant archaeological remains found in the lowest level of the shelter (Murphy, 1974).

Little work has been done on the distribution of stone axe types in North America. Warren King Moorehead long ago prepared a manuscript on "The Stone Axe and Its Variants," essentially a study of typology and distribution, aided by Frederick Johnson and Douglas Oliver. Plans to publish this monograph for Phillips Academy at Andover by Yale University Press apparently ended with Moorehead's death in 1939, but a typescript copy of the manuscript is housed in The Ohio Historical Society's Archives-Manuscripts Division, where it has been examined. Much of Moorehead's work concerns the absence or rarity of the grooved axe in Asia and the Pacific, where he perforce is concerned mainly with celt and adze forms. In North America, he notes the absence of the grooved axe in the northwest, but unfortunately his study was never completed and he had little to say about the Mississippi and Ohio Valley region.

This was remedied somewhat by James B. Griffin, who published his "Observations on The Grooved Axe in North America" in 1955, a succinct account of the distribution of the grooved axe. This has been supplemented by Ford (1969). Both authorities con-

clude that the two axe forms appeared during the late Archaic but that the three-quarter-grooved axe began to supplant the full-grooved axe by early Adena times. On excavated Archaic sites in the Ohio Valley, either one type or the other appears to preponderate. Thus, the Chiggerville, Kentucky, shell mound yielded 13 full-grooved axes; the Ward site, 26. A full-grooved and a three-quarter-grooved axe were found with separate burials at the Barrett site. The Smith rock shelter also yielded both types (one of each) but apparently not in direct association (Webb and Haag, 1947). Throughout the Kentucky Archaic site reports, the full-grooved axe is the dominant form. Indian Knoll produced nearly 200 axes, all full-grooved; the Read shell midden, 39 full-grooved axes; Carlson Annis, 42 full-grooved and four three-quarter-grooved axes. The Parrish site (Webb, 1951) is especially interesting since a three-quarter-grooved and a full-grooved axe were both found with a single burial. The site also yielded 20 other full-grooved axes and three three-quarter-grooved axes. In Indiana, the McCain site has produced 22 three-quarter-grooved axes. On the other hand, the Raisch-Smith site, one of the few excavated Ohio Archaic sites, produced 22 three-quarter-grooved axes.

When county distribution of the two axe types in Ohio is considered (Figs. 3 and 4), the influence of uneven sampling is apparent. One cannot evoke topography or the presumed distribution of large game to explain the dearth of grooved axes in southeastern Ohio, as has been done for the similar distribution of fluted points (Prufer and Baby, 1963). It seems far more plausible to relate this distribution pattern to the comparatively small amount of collecting done in southeastern Ohio, itself a reflection partly of the smaller amount of open tilled ground in that region (Murphy, 1975:68). It should also be borne in mind that this is a rather small statistical sample, based only upon published occurrences. Unfortunately, comparable distributional data is not available for neighboring states.

The two grooved axes from the Bob Evans shelter, along with a considerable amount of additional artifact material from this shelter,

were stolen from the display at Bob Evans Farms, Rio Grande, Ohio, during the summer of 1978.

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Fig. 1 (Murphy) Full grooved axe from the Bob Evans Shelter, Gallia Co, Ohio.

Fig. 2 (Murphy) Three-quarter grooved axe from the Bob Evans Shelter.



Fig. 3 (Murphy) Distribution of three-quarter-grooved axes in Ohio.



Fig. 4 (Murphy) Distribution of full-grooved axes in Ohio.